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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,038	05/03/2001	Hendrik Arien Dirkse	TS0764 US	8298

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EXAMINER

ELVE, MARIA ALEXANDRA

ART UNIT PAPER NUMBER

1725

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,038

Applicant(s)

DIRKSE ET AL.

Examiner

M. Alexandra Elve

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 5/3/04
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baillie (US Pat. 4,670,410).

Baillie discloses an apparatus for separating solid particles from vapor. The apparatus is used in combination with a hydrocarbon cracking or reforming plant setup, which separates solid particles from a (fluid) mixture of vapors and solids when restoring the catalytic activity of chemical particles. The fluid mixture enters the cyclone and a reflecting and centering device forms a vortex that minimizes or negates the re-entrapment of particles and hence maximized separation yields. The majority of the solid particles have a diameter in the range of 10 to 500 microns. At least one of the separation devices has a cylindrical shape and an inlet to introduce the fluid mixture into the reaction zone and chamber. Inlets and outlets are shown in figures 1-2 & 4. Two separation devices are used and are shown in figure 1. The fluid mixture flows through piping or risers and through a diffusion plate (41) that is a plate with holes in it. Additionally, a plate with holes (121) in it is used for vapor particle separation. (abstract,

figures 1-8, col. 3, lines 19-36, 45-51, 62-68, col. 4, lines 1-17, col. 5, lines 54-57, col. 6, lines 1-5, col. 7, lines 12-27, col. 11, lines 55-57, col. 12, lines 1-46, col. 13, lines 22-32, col. 20, lines 54-68, col. 21, lines 1-13, 51-55, col. 22, lines 49-60)

Baillie does not specifically teach the use of a sieve, however, the use of a diffusion plate for particle separation is disclosed. It is well known in the art that these are functional equivalents. The substitution of a known equivalent structure has been held to be obvious. In re Ruff 118 USPQ 343 (CCPA 1958).

Baillie does not teach the exact same range with respect to sieve (diffusion plate) sizing as instant claims. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claimed range (in this case catalytic particle sizes) are disclosed in the prior art, discovering the optimum value in a known separation system involves only routine skill in the art. See In re Boesch 205 USPQ 215.

Although the prior art, Baillie, teaches all the same apparatus parts of instant claims, the assembly is not exactly the same. Rearrangement of parts was held to have been obvious. In re Japikse 86 USPQ 70. Reversal of parts was held to have been obvious. In re Gazda 104 USPQ 400.

Response to Arguments

Applicant's arguments filed 5/3/04 have been fully considered but they are not persuasive. Applicant argues that the reference teaches a sieve while instant claims disclose a filter and hence applicant traverses the rejection. The examiner respectfully disagrees because the sieve has the same filtration properties of the filter, that is, it is a functional equivalent. Furthermore, substitution of known equivalent structures is held to be obvious. In re Ruff 118 USPQ 343 (CCPA 1958).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 22, 2004.



M. ALEXANDRA ELVE
PRIMARY EXAMINER